

Date: Thursday, 05/02/2009 10:04:55 AM
 User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : 407 HIGH AFT X-TUBE ASSEMBLY
 Job Number : 45515
 Estimate Number : 10528
 P.O. Number :
 This Issue : 05/02/2009 S.O. No. :
 Prsht Rev. : NC Part Number : D407667205
 Drawing Number : D407-667-245 REV F
 Project Number : N/A
 Drawing Revision : F
 First Issue : / / Type : CROSSTUBES
 Material :
 Previous Run : 45514 Due Date : 25/02/2009 Qty: 1 Um: Each

Written By :
 Checked & Approved By : JUD 090205
 Comment : Est Rev:C 05.09.02 Add holes for compatibility with Bell
 Skidtubes_KJ/JLM
 Est Rev:D Added Magnobond,Rubber Cushion & Clamps
 07-02-19 JLM

****CHANGE TO CHG 005 - IF USING D2894-1 B35578 OR
 GREATER****

Est Rev:E 08-05-22 add comment in seq. 6 and QC15 and
 QC5 DD verified by:EC

Est Rev:F 08-06-12 add comment in seq. 24 DD verified
 by:EC

Est Rev:G 08-08-19 revE as per dwg DD verified by:EC

Est Rev H 09.01.06 ECN 08-562 EC verified by:DD

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D407-667-205 CHG006

S 090205

2.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

3.0 D407667205TRN Crosstube Turning Detail



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

CROSSTUBE TURNING DETAIL

batch B-43230

MS 09-02-19

Q

4.0 BENDING BENDING MACHINE - SKIDTUBES



Comment: LANDING GEAR RESOURCE 1

1-Bend tube as per Dwg D407-667-245 using CNC bender program 407 Aft and Folio FT

MS 09-02-19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

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Job Number: 45515

Part Number: D407667205

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC15

DIMENSIONAL CHECK OF X-TUBES



Comment: DIMENSIONAL CHECK OF X-TUBES

09-02-19

6.0

CROSSTUBES

CROSSTUBES RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill pilot holes in tube using drill Jig DT8583 & DT8584 as per Dwg D407-667-245. Drill all (3) top holes.

2-Drill and Ream all holes in tube to finish size using drill Jig DT8583 & DT8584 as per Dwg D407-667-245. Check dimensions between holes on all four sides.

3-Flip tube and switch drilling Jigs from right to left, left to right. Locate Jigs off existing holes using "T" pins.

4-Drill pilot holes using drill Jig DT8583 & DT8584 as per Dwg D407-667-245. Drill only the top (2) holes.

5-Drill & ream the top (2) holes to finish size using drill Jig DT8583 & DT8584 as per Dwg D407-667-245

6-Drill Aft rivet holes using drill Jig DT8789 as per Dwg D407-667-245. Note: Aft side has 3x top holes.

7-Drill Fwd rivet holes using drill Jig DT8789 as per Dwg D407-667-245. Drill only the top (3) holes.

8-C'sink holes as per Dwg D407-667-245. Allow rivet to sit below surface to compensate for paint.

9-Deburr & Inspect for surface damage. Repair damage within limits as per Dwg D407-667-245

10- Scribe tube to identify on the inner chamfer in the cuff D# and B#

MB
09-02-19

MB 09-02-19

MB 09-02-19

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

MB 09-02-20

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

09-02-20

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Drawing Name: 407 HIGH AFT X-TUBE ASSEMBLY

Job Number: 45515

Part Number: D407667205

Job Number:



Seq. #:

Machine Or Operation:

Description :

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

05-02-20 (1)

10.0

OUTSIDE SERVICE

OUTSIDE SERVICES



Comment: Sub-Contracting OUTSIDE SERVICES

Liquid Penetrant Inspection as per QSI 038Or

Issue P/O: ~~8259~~ LPI as per ASTM 1417

Level 2 Attach copy of NDT results to work order

09/02/24 (1)

11.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Inspect for transit damage

Ensure copy of NDT results attached to work order.

02/24 (1)

12.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08-25 (1)

13.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside and outside crosstube as per QSI 005 4.2

2-Paint outside crosstube with White Imron as per QSI 005 4.2

PRIME:

Start Time: *9:00*

Fininsh Time: *10:30*

PAINT:

Start Time: *12:30*

Finish Time: *2:00*

PT 09-02-25

14.0

QC14

INSPECT SPRAY PAINT



Comment: Inspect Spray Paint

Wrap in plastic bag to protect from scratches

08-26 (1)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Job Number: 45515

Part Number: D407667205

Job Number:



Seq. #:	Machine Or Operation:	Description :
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15.0	D2856400	Abrasion Strip
------	----------	----------------



Comment: Qty.: 1.3524 f(s)/Unit Total : 1.3524 f(s)

Pick:

Qty Part number Description Batch

2 D2856-400(Cut to 7.73") Abrasion Strip 37667

RT 09-03-04

16.0	D2873043	Nut Plate Assembly
------	----------	--------------------



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2873-043 Nut Plate 43669

RT 09-02-24

17.0	D2873045	Nut Plate Assembly
------	----------	--------------------



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D2873-045 Nut Plate 43409

RT 09-02-24

18.0	D28941	2.750 Support
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part number Description Batch

1 D2894-1 Support 43713

RT 09-02-29

19.0	D31901	Chafing Shield
------	--------	----------------



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Pick:

Qty Part number Description Batch

2 D3190-1 Chafing Shield 37969

RT 09-03-04

20.0	D3595063430	rubber cushion
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Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Rubber Cushion .63" X 4.30"

Batch: 41108

RT 09-02-29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Job Number: 45515

Part Number: D407667205

Job Number:



Seq. #:

Machine Or Operation:

Description :

21.0

MS20601AD4W8

RIVET



Comment: Qty.: 14.0000 Each(s)/Unit Total : 14.0000 Each(s)

Pick:

Qty Part number Description Batch

14 MS20601AD4W8 Rivet 109297

ET 09-02-24

22.0

MS2192022

Clamp(per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Pick:

Qty Part number Description Batch

4 MS21920-22 Clamp 109495

ET 09-03-04

23.0

MS2192025

Clamp(per MIL-DTL-8783C)



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Clamp(per MIL-DTL-8783C)

Batch: 107644

ET 09-02-29

24.0

CROSSTUBES

CROSSTUBES RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Install abrasion strips as per QSI 035 using DT8674. Install chafing shield as per Dwg D407-667-245. Note: (3) top holes should be facing up. ET 09-03-04

2- Lightly scuff the bonded area using a 320 grit sand paper and clean the area with 41058 wash 'n' wipe ET 09-02-29

3-Install support with magnobond and install clamps as per Dwg D407-667-245 using installation jig DT9025.

Torque clamps to 80-100 in lb

A/R Magnobond

Batch: 109900

EXP: 09-09-19

ET 09-02-29

4-Install nut plates as per Dwg D407-667-245. Touch-up rivet heads with Imron paint.

ET 09-02-24

25.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 09/03/04 (H)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Process Sheet

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Job Number: 45515

Part Number: D407667205

Job Number:



Seq. #:	Machine Or Operation:	Description :
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26.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1
Pick Packing Kit

27.0	AN534A	Bolt
------	--------	------



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
Bolt
Batch: 109752

28.0	MS21042L5	Nut
------	-----------	-----



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
Nut
Batch: M110382

29.0	AN510A	Bolt
------	--------	------



Comment: Qty.: 10.0000 Each(s)/Unit Total : 10.0000 Each(s)
Pick:Packing Kit
Qty Part number Description Batch
10 AN5-10A Bolt M110363

30.0	AN532A	Bolt
------	--------	------



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)
Pick:Packing Kit
Qty Part number Description Batch
4 AN5-32A Bolt M110363

31.0	AN960JD516	Washer
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Comment: Qty.: 18.0000 Each(s)/Unit Total : 18.0000 Each(s)
Pick:Packing Kit
Qty Part number Description Batch
18 AN960JD516 Washer M110363

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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Job Number: 45515

Part Number: D407667205

Job Number:



Seq. #:

Machine Or Operation:

Description :

32.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

09/03/05 (K)

33.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and in kanban rack

Location: B

9/3/5

(K)

SP

34.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

09/03/06

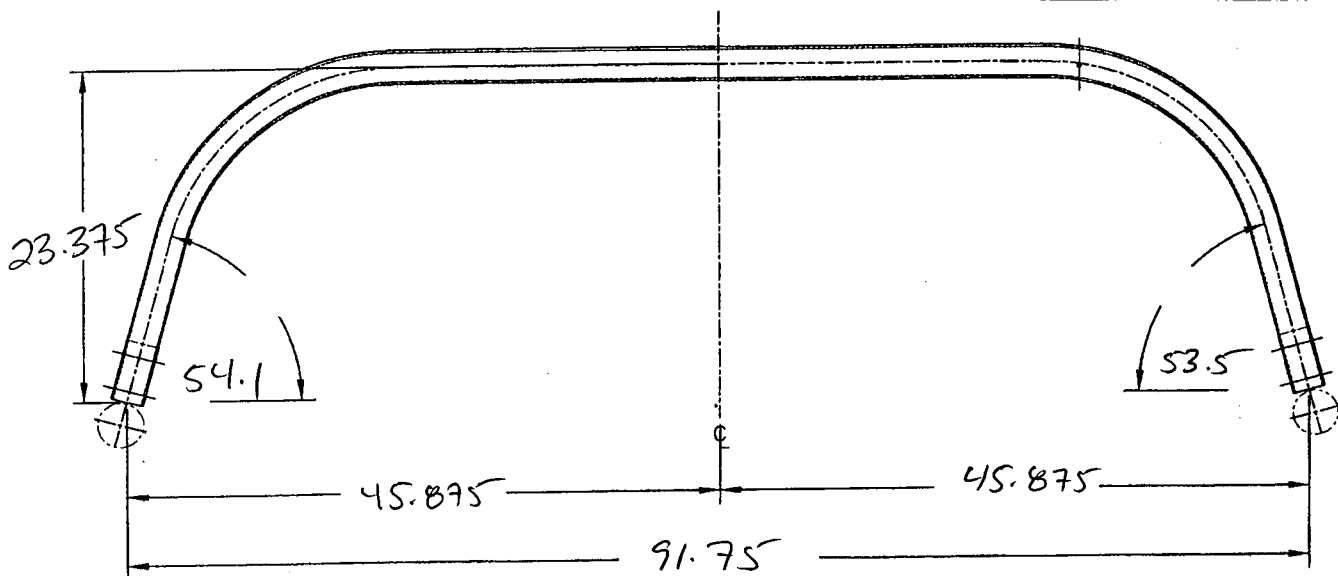
Job Completion



MF
09-03-05

DART AEROSPACE LTD		Work Order:	W5515
Description: Crosstube High Aft (407)		Part Number:	D407-667-205
Inspection Dwg: D407-667-245 Rev: D		Page 1 of 1	

Required Dimension	Min	Max
Height	23.46	23.58
1/2 Span	45.86	45.98
Angle	54	56
Total Span	91.72	91.96



Comments

QC15 Inspection	209.02.19
Date	

Rev	Date	Change	Revised by	Approved
A	07.02.06	New Issue	KJ/JM	<i>[Signature]</i>

Item	QTY -245	PART NUMBER	DESCRIPTION
1	X	D407-667-245	CROSSTUBE ASSEMBLY (407 HIGH AFT)
2	1	D6011-115	CROSSTUBE
3	2	D2856-400-773	ABRASION STRIP
4	2	D2873-043	NUT PLATE
5	2	D2873-045	NUT PLATE
6	1	D2894-1	SUPPORT
7	2	D3190-1	CHAFING SHIELD
8	2	D3595-063-430	RUBBER CUSHION
9	14	MS20601AD4W8	RIVET (OR NAS9302B-4-8)
10	4	MS21920-22	CLAMP
11	2	MS21920-25	CLAMP (OR MS21920-24)
12	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947- 100, TYPE II, CLASS 2 ADHESIVE)

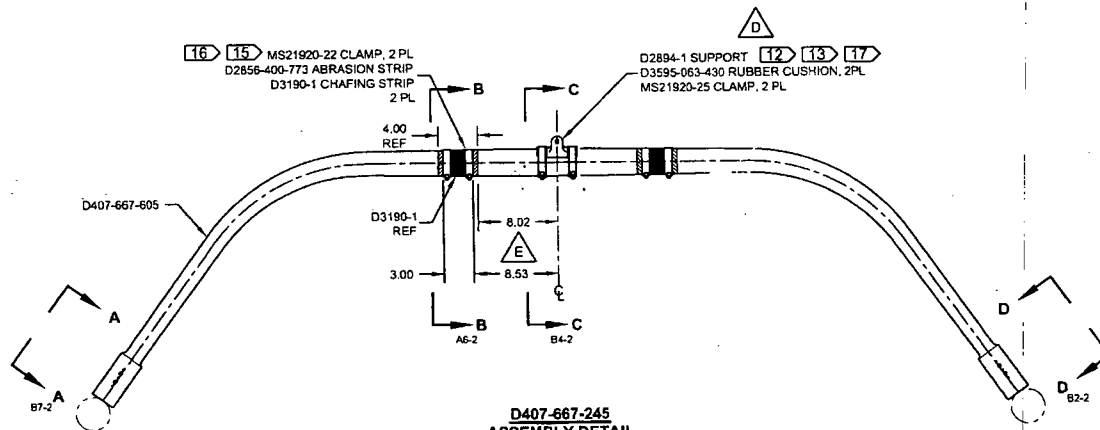
GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6011-115
FINISHED LENGTH = 112.91±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D407-667-245" AND BATCH NUMBER ON
INSIDE OF CUFF USING VIBRATING STYLUS.
- 7) WEIGHT: 27.7 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN-OFF PART. BLEND OUT EDGE LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 6 PASSES. MAXIMUM TUBE FLATTENING DUE TO
BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2894-1 CENTER SUPPORT USING A 0.03" TO 0.06" THICK LAYER OF MAGNOBOND
6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO
PACKAGING.
- 13) INSTALL MS21920-25 CLAMPS WITH D3595-063-430 RUBBER CUSHIONS TO SECURE D2894-1
SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMPS ARE OPPOSITE CROSSTUBE
SUPPORT.
NOTE: MS21920-24 CLAMPS CAN BE USED TO ACCOMMODATE VARYING DIAMETERS.
ENSURE THERE IS A MINIMUM OF 1.5 THREADS IN SAFETY ON THE NUTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS
SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT
LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) INSTALL D2856-400-773 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF
CROSSTUBE, PER QSI 035.
- 16) INSTALL D3190-1 CHAFING SHIELDS SO THAT OVERLAP IS ON BOTTOM SIDE OF CROSSTUBE
OPPOSITE D2894-1 SUPPORT.
- 17) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN
SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

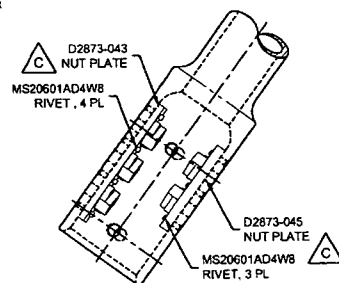
RELEASED
08/11/06

F	REFORMAT NOTES TO NEW STANDARDS (ZN B8-1); RELOCATED FLAG # 6 (ZN A8-3) PER NCR 210; REMOVED REF. & ADD TOLERANCES (ZN C6-3, C4-3 & D2-3)	RF	08.11.06
E	8.02 AND 8.53 WERE 8.40 AND 8.90 (ZN D5-2); REORGANIZED VIEWS AND REFORMATED DRAWING TO CURRENT STANDARDS. REASONS: CLAMPS MOVED 0.375 TOWARD CL TO ELIMINATE INTERFERENCE WITH AIRCRAFT MOUNTS. REFERENCE: PAR#08-21 AND ECN#1225	MB	08.07.24
D	ADD VIEW FOR OEM SKID HOLES, ROTATE ORIENTATION OF CLAMPS SECTION F-F, REMOVE -851 ABRASION STRIP, ADD MAGNOBOND 6398, ADD CUSHION	PH	07.02.07
C	ADD HOLES AND NUT PLATES FOR COMPATIBILITY WITH BHT/AA SKIDTUBES	PH	05.07.26
B	ADD CHAFING SHIELD	CP	03.05.21
A	NEW ISSUE	CP	02.05.13
REV.	DESCRIPTION	BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. REV. F D407-667-245 SHEET 1 OF 4 TITLE SCALE CROSSTUBE ASSY (407 HIGH AFT) NTS <small>COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMBINED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	
DRAWN	RF		
CHECKED	RF		
MFG. APPR.	RF		
APPROVED	RF		
DE APPR.	RF	DATE 08.11.06	

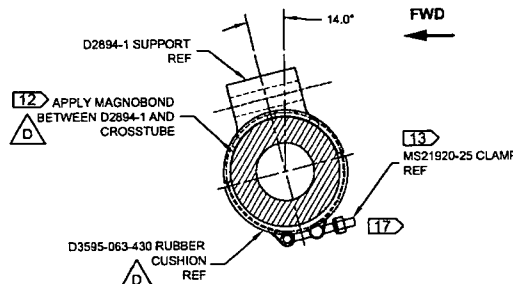
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WORK ORDER
SUBJECT TO ATTACHMENT
ENGINEERING
RETENTION
SHOP COPY
CONTROLLED COPY



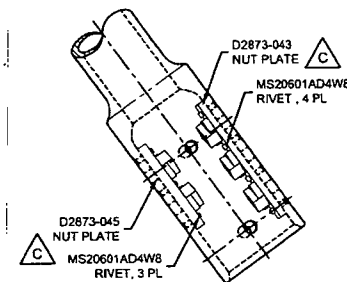
**D407-667-245
ASSEMBLY DETAIL
(VIEW LOOKING FWD)**



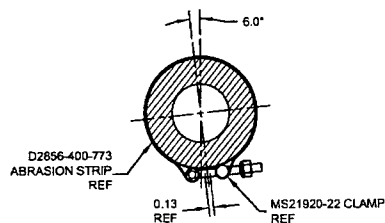
**VIEW A-A CUFF DETAIL
SCALE 4X**



**SECTION C-C
SCALE 4X**



**VIEW D-D CUFF DETAIL
SCALE 4X**



**SECTION B-B
SCALE 4X, 2PL**

RELEASED

DESIGN	q	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	q	DRAWING NO.	REV. F
MFG. APPR.	E	D407-667-245	SHEET 2 OF 4
APPROVED	q	TITLE	SCALE
DE APPR.	q	CROSSTUBE ASS'Y (407 HIGH AFT)	NTS
DATE	08.11.06	<small>COPYRIGHT © 2002 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

NO. 15375
WORK ORDER
WITHOUT NOTICE
UNCONTROLLED COPY
ENGINEERING
RETURN TO
SHOP COPY

8 7 6 5 4 3 2 1

D

C

B

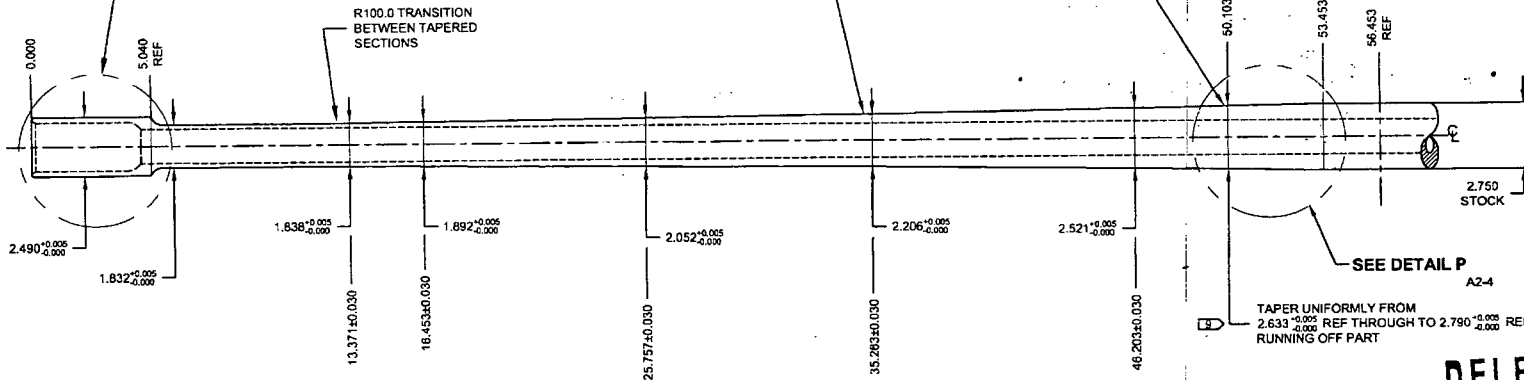
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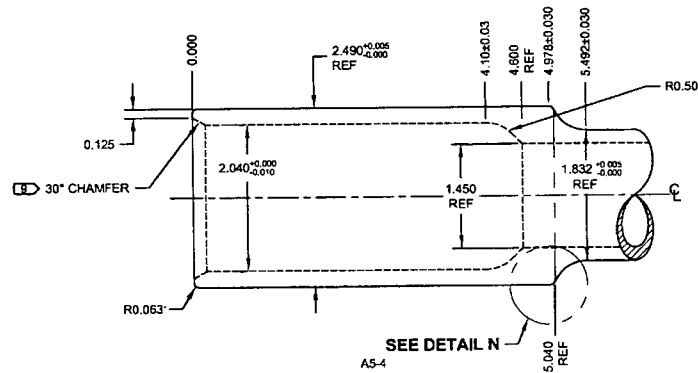
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SEE DETAIL M
A7-4

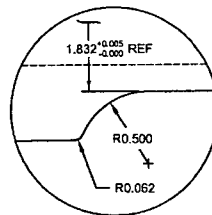


D407-667-245 MACHINING DETAIL

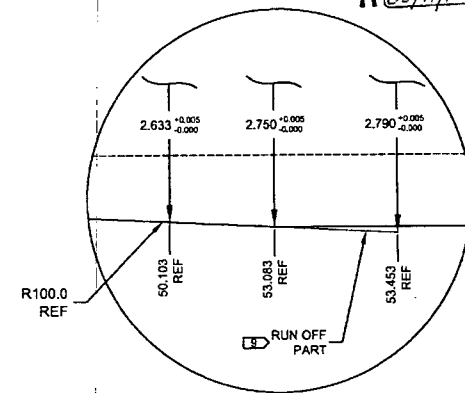
RELEASED
08/11/12



DETAIL M: CROSSTUBE CUFF
SCALE 3X



DETAIL N: CUFF TRANSITION
SCALE 2X



DETAIL P: TAPER RUN-OFF
NOT TO SCALE

DESIGN	Q	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	Q	DRAWING NO.	REV. F
MFG. APPR.	Q	D407-667-245	SHEET 4 OF 4
APPROVED	Q	TITLE	SCALE
DE APPR.	Q	CROSSTUBE ASS'Y (407 HIGH AFT)	NTS
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LIQUID PENETRANT TEST REPORT

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CLIENT DART AEROSPACE DATE FEB-24-2009 TIME AM ☒ PM ☐
ATTENTION LINDA / CHANTREL ACUREN JOB NO. 188-09-001327
ADDRESS 1270 ABERDEEN ST PO/NO. 8259
HAWKESBURY ON. WORK LOCATION 5HOP
K&H TR7 ACCEPTANCE STD. ASTM 1417 REV./DATE 2007
PROJECT F.P.I. ON CROSS TUBES
ITEM(S) EXAMINED 4 PCS.

JOB DESCRIPTION PROCEDURE No. LT-XXXX REV./DATE TECHNIQUE No. LT-XXXX-XXX REV./DATE
PART No. MATERIAL ALUMINUM THICKNESS
SCOPE WET FLOUORESCENT LIQUID PENETRANT INSPECTION
CARRIED OUT 100% EXTERNAL.

TEST DETAILS

METHOD ☒ FLUORESCENT ☐ VISIBLE ☒ WATER WASH ☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED
FAMILY BRAND MAGNAFLUX BLACK LIGHT S/N IP65 ☐ OUTPUT > 1000 μ W/cm² ☐ AMBIENT < 2 fc
PENETRANT 2L63 MINIMUM DWELL TIME 45 MIN. LIGHTING EQUIP. ☐ FLASHLIGHT ☐ TROUBLELIGHT ☐ OUTPUT > 100 fc @ SURFACE
PENETRANT REMOVER H2O MINIMUM DRY TIME >10 MIN. OTHER LABINO
DEVELOPER SKD 52 MINIMUM DWELL TIME 10 MIN. LIGHT METER S/N CAL DUE DATE FEB 2010
DEVELOPER TYPE ☒ NON AQUEOUS ☐ AQUEOUS ☐ DRY

TEST SURFACE

SURFACE CONDITION ☐ AS GROUND ☐ AS WELDED ☐ MACHINED ☐ SHOT BLASTED ☐ CLEAN BARE METAL
SURFACE TEMPERATURE ☐ < -4°C/ 20°F ☐ -4°C/ 20°F TO 10°C/50°F ☐ 10°C/50°F TO 52°C/125°F ☐ > 52°C/125°F

RESULTS- (☐ METRIC ☐ IMPERIAL)

ITEM	COMMENTS	ACCEPT	REJECT
1	45510		
1	45511		
1	45806		
1	45513		
Four CROSS TUBES WERE EXAMINED AND FOUND TO BE ACCEPTABLE.			

Scope of Services

The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.

Standard of Care

In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES

CLIENT REPRESENTATIVE Ian Tittley DTR # 19814
TECHNICIAN (SIGNATURE): [Signature] REPORT REVIEWED BY:
NAME (PRINT): Mike Jettus Tan NAME INITIALS
CGSB LEVEL II SNT LEVEL CGSB LEVEL SNT LEVEL
CGSB REG. No 0666 CGSB REG. No

Date: Monday, 09/02/2009 10:34:54 AM
 User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : 407 HIGH AFT X-TUBE ASSEMBLY
 Job Number : 45515
 Estimate Number : 10528
 P.O. Number : Part Number : D407667205
 This Issue : 09/02/2009 S.O. No. : Drawing Number : D407-667-245 REV F
 Prsht Rev. : NC Project Number : N/A
 First Issue : 05/02/2009 Type : CROSSTUBES Drawing Revision : F
 Previous Run : 45514 Material :
 Written By : Due Date : 25/02/2009 Qty: 1 Um: Each
 Checked & Approved By :
 Comment : Est Rev:C 05.09.02 Add holes for compatibility with Bell
 Skidtubes KJ/JLM
 Est Rev:D Added Magnobond,Rubber Cushion & Clamps
 07-02-19 JLM

****CHANGE TO CHG 005 - IF USING D2894-1 B35578 OR
 GREATER****

Est Rev:E 08-05-22 add comment in seq. 6 and QC15 and
 QC5 DD verified by:EC

Est Rev:F 08-06-12 add comment in seq. 24 DD verified
 by:EC

Est Rev:G 08-08-19 revE as per dwg DD verified by:EC

Est Rev H 09.01.06 ECN 08-562 EC verified by:DD

REFERENCE ONLY

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
1.0	DC	DOCUMENT CONTROL



7009.0220



Comment: DOCUMENT CONTROL

Photocopy bluefile and create labels as per PPP D407-667-205 CHG006

607/03/05

2.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

3.0

D407667205TRN

Crosstube Turning Detail



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

CROSSTUBE TURNING DETAIL

batch _____

Job Completion

